

REMARKS

The Office Action mailed on March 22, 2007 has been carefully considered. Reconsideration and allowance of the subject application, as amended, are respectfully requested. Claims 1, 3, 5, 7, 9, 13, 16, and 18 are currently amended in this application. Claim 14 has been cancelled. Therefore, claims 1-13 and 15-21 are still pending in this application.

35 USC §102 Rejection of the Claims

Claims 1, 5, 13, 15 & 21 were rejected under 35 USC § 102(e) as anticipated by Foster et al. (U.S. Publication No. 2005/0125574 A1). Independent claims 1, 5, 13, and 18 have been amended to include additional limitations to zoning as discussed in Item 4 of the Official Action. Thus, this rejection is now believed moot.

§103 Rejection of the Claims

Claims 1, 5, 13, 15 & 21 were rejected under 35 USC § 103(a) as being unpatentable over Foster et al. (U.S. Publication No. 2005/0125574 A1). This rejection is also deemed moot in light of the preceding amendments and following discussion.

Claims 2-3 & 6-7, 9-12, 16 & 18-20 were rejected under 35 USC § 103(a) as being unpatentable over Foster et al. (U.S. Publication No. 2005/0125574 A1) in view of Zhang et al. (U.S. Publication No. 2004/0098503 A1) or Trehus (U.S. Patent No. 5,845,087) or Jo et al. (U.S. Publication No. 2004/0068580 A1). Applicant respectfully traverses this rejection in light of the preceding amendments and following remarks.

Applicant's newly amended claim 1 is provided below for the Examiner's convenience.

1. (Currently Amended) An apparatus comprising:
a Serial Attached Small Computer Systems Interface (SAS) expander configured to communicate with a plurality of SAS devices using, at least in part a SAS protocol, the expander comprising:
a plurality of ports capable of being coupled to a plurality of devices via an associated plurality of communication links, the links being compliant with SAS protocol; and
communication control circuitry to provide selectable communication control between at least a first device and at least a second device of said plurality of devices, said communication control circuitry configured to designate at least one zone among said plurality of devices, said communication control circuitry further configured to evaluate a

communication request from one of said plurality of devices to allow or deny said communication request based upon said at least one zone. (Emphasis Added).

Thus, Applicant's newly amended independent claim 1 is directed to a SAS expander having control communication circuitry "configured to designate at least one zone among said plurality of devices, said communication control circuitry further configured to evaluate a communication request from one of said plurality of devices to allow or deny said communication request based upon said at least one zone." As discussed in the subject application, the SAS standard does not provide zoning controls to restrict access to devices and "does not provide for selectable communication control using an expander." Subject appln., para. [0004]. Applicant's newly amended claim 1 addresses the void created by the SAS standard by providing a SAS expander "configured to designate at least one zone among said plurality of devices."

In contrast, the Examiner seems to point to Foster as teaching the general concept of the use of an expander in a SAS system. Applicant does not dispute this. However, as the Examiner alluded to in the Official Action, Foster does not appear to disclose "control circuitry configured to designate at least one zone among said plurality of devices" in a SAS protocol. The Examiner points to Zhang, Trehus, and Jo as teaching the general concept of zoning. Each of these references will be discussed in turn below.

The Examiner states that "it would have been obvious at the time the invention was made to one having ordinary skill in the art to add such well known zoning feature, as taught by Zhang, Trehus and Jo to the Foster reference for the motivation of efficient/controlled communication." Official Action, page 4. Zhang appears to disclose a method and apparatus for generating a routing table for use with a peer-to-peer (P2P) file sharing service. Zhang, Abstract. Trehus appears to disclose a zone filtering method and apparatus "with which a network administrator is able to restrict which zones are available to specific internetwork branches of the AppleTalk internet." Trehus, col. 2, lines 22-24. Jo appears to disclose a routing control method utilizing a routing control table. Jo, Abstract and Figure 1. These references appear merely to disclose the general proposition of zoning as used by devices of differing technological arts. However, none of these references appear to teach or suggest the concept of zoning devices in a SAS protocol, or more particularly, the use of zoning in a SAS expander.

Applicant respectfully submits that the combination of Foster with either Zhang, Trehus or Jo is improper. While Foster does appear to disclose the presence of a SAS expander, the SAS expander 110 described in Figure 1B of Foster operates in conjunction with other devices such as SAS controller 105. These devices communicate “using SAS physical interconnections and messaging defined by the SAS standard. Foster, para. [0016]. As discussed in the subject application, “the SAS Standard does not provide for selectable communication control using an expander.” Subject appln., para. [0004]. Applicant is unable to understand how a person of ordinary skill in the art would look to incorporate the “selectable communication control” of the subject application, such as zoning control, into a device having an architecture that conforms to a standard which does not provide for such control. Applicant respectfully submits that a person of ordinary skill in the art would not know how to incorporate the zoning described in either Zhang, Trehus or Jo with Foster because Foster describes an expander that operates in accordance with the SAS standard.

Thus, Applicant respectfully submits that a person of ordinary skill in the art would not look to combine either Zhang, Trehus, or Jo with the Foster reference, because none of these references teach or suggest a SAS expander having selectable communication control such as “communication control circuitry configured to designate at least one zone among said plurality of devices”, as required by Applicant’s newly amended independent claim 1. Therefore, Applicant respectfully submits that independent claim 1 is in condition for allowance. Independent claims 5, 9, 13, and 18 have been amended to include similar limitation to Applicant’s newly amended claim 1. Thus, Applicant respectfully submits that these claims are in condition for allowance as well.

Since claims 2-4, 6-12, 15-17, and 19-21 depend, either directly or indirectly from Applicant’s independent claims 1, 5, 9, 13 and 18, Applicant respectfully submits that these claims are in condition for allowance as well.

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant’s attorney (603-668-6560) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-2121.

Respectfully submitted,

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